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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,737	08/25/2003	Arvind D. Patel	05542/073001	2299
26722	7590	12/14/2007		
OSHA LIANG/MI ONE HOUSTON CENTER SUITE 2800 HOUSTON, TX 77010			EXAMINER FEELY, MICHAEL J	
			ART UNIT	PAPER NUMBER
			1796	
			NOTIFICATION DATE	DELIVERY MODE
			12/14/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/647,737	PATEL ET AL.	
	Examiner	Art Unit	
	Michael J. Feely	1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Pending Claims

Claim 21 is pending.

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114 was filed in this application after appeal to the Board of Patent Appeals and Interferences, but prior to a decision on the appeal. Since this application is eligible for continued examination under 37 CFR 1.114 and the fee set forth in 37 CFR 1.17(e) has been timely paid, the appeal has been withdrawn pursuant to 37 CFR 1.114 and prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on October 29, 2007 has been entered.

Response to Amendment

2. The rejection of claim 21 under 35 U.S.C. 102(b) as being anticipated by, or in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Van Slyke (US Pat. No. 6,017,854) has been overcome by amendment.

Response to Arguments

3. Applicant's arguments, see pages 3-4 of the response, filed October 29, 2007, with respect to the rejection of claim 21 under 35 U.S.C. 112, second paragraph, have been fully considered and are persuasive. The previous rejection of claim 21 has been withdrawn.

Information Disclosure Statement

4. A set of NPL references was submitted on October 29, 2007; however, an information disclosure statement did not accompany these references. Accordingly, they have not been considered.

Claim Rejections - 35 USC § 102/103

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 21 is rejected under 35 U.S.C. 102(e) as being anticipated by, or in the alternative, under 35 U.S.C. 103(a) as being unpatentable over Temple et al (US Pat. No. 6,861,393).

Regarding claim 21, Temple et al. disclose: **(21)** a drilling fluid (column 2, lines 31-41) comprising:

(A) an oleaginous fluid (Tables 3 & 4: "DF" diesel fuel), wherein the oleaginous fluid is the continuous phase of the drilling fluid (Tables 3 & 4: "DF" diesel fuel) and wherein the oleaginous fluid comprises from about 30% to about 95% by volume of the drilling fluid (Tables 3 & 4: "DF" diesel fuel) and the oleaginous fluid of a material selected from the group consisting diesel oil, mineral oil, synthetic oil, esters, ethers, acetals, di-alkylcarbonates, olefins, and combinations thereof (Tables 3 & 4: "DF" diesel fuel);

(B) a non-oleaginous fluid (Tables 3 & 4: "water"), wherein the non-oleaginous fluid is the discontinuous phase of the drilling fluid (Tables 3 & 4: "water"), wherein the non-oleaginous fluid comprising from about 1% to about 70% by volume of said drilling fluid (Tables 3 & 4: "water") and the non-oleaginous fluid is selected from the group consisting of fresh water, sea water, a brine containing organic or inorganic dissolved salts, a liquid containing water-miscible organic compound, and combinations thereof (Tables 3 & 4: "water");

(C) an organophillic clay (Tables 3 & 4: "DURATONE ® HT"; *see also product data sheet*), wherein the organophillic clay is present in a concentration of about 0.1% to about to about 6% by weight (Tables 3 & 4: "DURATONE ® HT");

(D) a primary emulsifier (Tables 3 & 4: "EZ MUL ® NT"), wherein the primary emulsifier is in sufficient concentration to stabilize the invert emulsion (Tables 3 & 4: "EZ MUL ® NT");

(E) a weighting agent (Tables 3 & 4: "Barite"), wherein the weighting agent or bridging agent is selected from the group consisting of galena, hematite, magnetite, iron oxides, illumenite, barite, siderite, selstite, dolomite, calcite and combinations thereof (Tables 3 & 4: "Barite"); and

(F) a rheology modifier (Tables 3 & 4: "RM TM 63"; *see also product data sheet*), wherein the rheology modifier is a mixture of polycarboxylic fatty acids (Tables 3 & 4: "RM TM 63"), wherein the mixture of polycarboxylic fatty acids is added in sufficient concentration so that the fatty acid concentration in the drilling fluid is greater than 0.1 pounds per barrel and is up to 5.0 pounds per barrel (Tables 3 & 4: "RM TM 63").

Temple et al. do not explicitly set forth that the *trimer polycarboxylic fatty acid concentration* is greater than 0.1 pounds per barrel and is up to 5.0 pounds per barrel; however, it appears that the fatty acid mixture in Temple et al. would have inherently satisfied this limitation. This is based on the *blend* amounts set forth in Tables 3 & 4.

The following should be noted:

- Total weight of composition: (18 lb/gal.) x (42 gal./bbl) = 756 lb/bbl;
- Total DF 1 (invert emulsion base) = 0.393 bbl;
- Total water = 0.102 bbl;
- Total volume = 0.495 bbl;
- Approximate % volume (A) DF 1 = 79%;

- Approximate % volume (B) water = 21%;
- Approximate % weight (C) = $(20 \text{ lb/bbl}) / (756 \text{ lb/bbl}) \times 100 = 2.6\%$;
- Total (F) = 1.0 lb/bbl.

Claim Rejections - 35 USC § 103

8. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Reddie et al. (US Pat. No. 2,994,660) in view of Van Slyke (US Pat. No. 6,017,854).

Regarding claim 21, Reddie et al. disclose: **(21)** a drilling fluid (column 1, lines 9-19) comprising:

(A) an oleaginous fluid (column 1, lines 9-16; column 5, line 16-49), wherein the oleaginous fluid is the continuous phase of the drilling fluid (column 1, lines 9-19) and wherein the oleaginous fluid comprises from about 30% to about 95% by volume of the drilling fluid (column 5, lines 42-46; column 4, lines 50-67) and the oleaginous fluid of a material selected from the group consisting diesel oil, mineral oil, synthetic oil, esters, ethers, acetals, di-alkylcarbonates, olefins, and combinations thereof (column 5, lines 16-49);

(B) a non-oleaginous fluid (column 1, lines 9-16; column 4, line 20 through column 5, line 15), wherein the non-oleaginous fluid is the discontinuous phase of the drilling fluid (column 1, lines 9-19), wherein the non-oleaginous fluid comprising from about 1% to about 70% by volume of said drilling fluid (column 4, lines 50-67) and the non-oleaginous fluid is selected from the group consisting of fresh water, sea water, a brine containing organic or inorganic dissolved salts, a liquid containing water-miscible organic compound, and combinations thereof (column 4, line 20 through column 5, line 15);

(C) a clay (column 15, line 37 through column 16, line 15), wherein *the clay* is present in a concentration of about 0.1% to about to about 6% by weight (column 15, lines 37-55; Example VI);

(D) a primary emulsifier (column 10, line 35 through column 13, line 9), wherein the primary emulsifier is in sufficient concentration to stabilize the invert emulsion (column 12, lines 21-33);

(E) a weighting agent (column 2, lines 35-41; Example VI), wherein the weighting agent or bridging agent is selected from the group consisting of galena, hematite, magnetite, iron oxides, illumenite, barite, siderite, selstite, dolomite, calcite and combinations thereof (Example VI); and

(F) a rheology modifier (column 5, line 50 through column 10, line 33), wherein the rheology modifier is a mixture of polycarboxylic fatty acids (column 9, lines 34-70), wherein the mixture of polycarboxylic fatty acids is added in sufficient concentration so that the fatty acid concentration in the drilling fluid is greater than 0.1 pounds per barrel and is up to 5.0 pounds per barrel (column 9, lines 34-70).

Reddie et al. disclose the use of both a weighting agent (barite) and a clay (X-811) (*see Example VI*), wherein, "As to the type of clay selected, it should have sufficient absorptive power to permit, with reasonable minimum concentrations of clay, adsorption on the clay of the liquid ingredients of formula (aside from the acid polymer) as well as any moisture collection in the concentrate from the atmosphere," (*see column 15, lines 37-42*). However, they fail to explicitly disclose organophillic *clay*.

Van Slyke discloses drilling muds featuring similar ingredients (*see column 3, lines 33-65*). They disclose that both organophillic and non-organophillic clays are recognized in the art at *conventional viscosifiers* for drilling muds (*see column 12, lines 32-46*). This disclosure demonstrates that these materials are recognized as functional equivalents. In light of this, it has been found that combining or substituting equivalents known for the same purpose is *prima facie* obvious - *see MPEP 2144.06*.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the clays of Reddie et al. with organophillic clays because the teaching of Van Slyke demonstrate that these clays are recognized in the art as functional equivalent viscosifiers for drilling muds.

Communication

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J. Feely whose telephone number is 571-272-1086. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Y. Pyon can be reached on 571-272-1498. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Michael J. Feely
Primary Examiner
Art Unit 1796

December 3, 2007

**MICHAEL FEELY
PRIMARY EXAMINER**